

REMARKS

I. Introduction

With the addition of new claim 6, claims 5 and 6 are pending in the present application. In view of the foregoing amendments and following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants thank the Examiner for acknowledging the claim for foreign priority and for indicating that all certified copies of the priority documents have been received.

Applicants thank the Examiner for considering the previously filed Information Disclosure Statement, PTO-1449 paper and cited references.

II. Rejection of Claim 5 Under 35 U.S.C. § 102(b)

Claim 5 was rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,347,464 ("Park et al."). Applicants respectfully submit that Park et al. do not anticipate claim 5 as amended herein for the following reasons.

Claim 5 relates to an electronically commutatable motor. Claim 5 recites a plurality of excitation windings having a common magnetic circuit and a corresponding plurality of power semiconductor output stages, the output stages including low-side-connected N-channel MOSFETs. Claim 5 further recites that each of the excitation windings is connected in a series circuit integrally with a respective one of the MOSFETs, the excitation windings being connected to a common direct-current supply voltage. Claim 5 further recites that the excitation windings are energized successively in a commutation cycle and are situated alternately in opposite directions into the series circuits with the MOSFETs. Claim 5 further recites that in the context of more than two excitation windings, the commutation cycle extends over an even number of successive, alternately oppositely polarized excitation windings, and wherein, in associated commutation phases, the MOSFETs are driven fully into a conductive state with uniform control signals. Claim 5 still further recites a smoothing capacitor connected in parallel to the series circuits for transferring back, in a countercurrent direction to the direct-current supply voltage, a disconnection energy transferred in a transformer fashion, upon disconnection of the excitation windings, to a respectively next energizable excitation winding. Claim 5 has been amended herein without prejudice to recited

that the smoothing capacitor is connected in parallel to the series circuits of the MOSFETs and windings between the voltage and ground. Support for the amendment may be found, for example, in Figure 2.

Applicants respectfully submit that Park et al. do not disclose, or even suggest, the features of amended claim 5, including a smoothing capacitor connected in parallel to series circuits of MOSFETs and windings between voltage and ground. Park et al. provide a “snubber capacitor” 19, 33 that is arranged at respective ends of pairs of windings 7, 9 and 11, 13. A voltage +V is connected at respective endings of pairs of windings 7, 9 and 11, 13 and is expended by the connection to ground. Fig. 1. This voltage +V is dissipated over the windings (in part), the snubber capacitor (19,33) (in part) and the MOSFET’s Q1, Q2, Q3 and Q4 (in part). The Office Action alleges that Park et al. provide two interpretations, where the first interpretation is a pair of windings consisting of windings 7, 9 and 11, 13 where the windings share a common stator laminated core. Applicants respectfully submit that the placement of the snubber capacitors 19 and 33 does not allow for a configuration in which a smoothing capacitor is connected in parallel to series circuits of MOSFETs and windings between voltage and ground. Park et al. specifically provide for the placement of snubber capacitor 33 between the windings 11, 13 and the MOSFET’s Q2 and Q4. The snubber capacitor 33, therefore, is only placed across a partial voltage between +V and ground and no parallelism exists as required in amended claim 5. Park et al., for this first alternative reading, do not disclose or suggest the features of amended claim 5.

The Office Action alleges that there is a second alternative interpretation of Park et al. In the second alternative interpretation, a single set of windings 7 and 9 are alleged to be equated to the plurality of excitation windings of claim 5. As a result, the snubber capacitor 19 is alleged to be the smoothing capacitor of claim 5. Applicants submit that this alternate reading does not disclose, or even suggest, the configuration of a smoothing capacitor connected in parallel to series circuits of MOSFETs and windings between voltage and ground. In the alternative interpretation, the snubber capacitor 19 is positioned similarly to snubber capacitor 33, where the capacitor 19 does not have the required parallelism. As a result, Park et al. fail to disclose, or even suggest, the features of amended claim 5.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of

Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As more fully set forth above, it is respectfully submitted that Park et al. do not disclose, or even suggest, all of the limitations of claim 1, namely a smoothing capacitor connected in parallel to the series circuits of the MOSFETs and windings between the voltage and ground. It is therefore respectfully submitted that Park et al. do not anticipate amended claim 5. Withdrawal of this rejection is therefore respectfully requested.

III. New Claim 6

New claim 6 has been added herein. It is respectfully submitted that new claim 6 adds no new matter to the present application and is fully supported by the present application, including the Specification. Since claim 6 includes features analogous to the features recited in claim 5, it is respectfully submitted that claim 6 is patentable over the references relied upon for at least the same reasons given above in support of the patentability of claim 5.

IV. Conclusion

It is respectfully submitted that all pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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